

TISSUE BIOPSY AND TREATMENT APPARATUS AND METHOD

ABSTRACT OF THE DISCLOSURE

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A method of treating a tumor includes providing a tissue biopsy and treatment apparatus that includes an elongated delivery device that has a lumen and is maneuverable in tissue. A sensor array having a plurality of resilient members is deployable from the elongated delivery device. At least one of the plurality of resilient members is positionable in the elongated delivery device in a compacted state and deployable with curvature into tissue from the elongated delivery device in a deployed state. At least one of the plurality of resilient members includes at least one of a sensor, a tissue piercing distal end or a lumen. The sensor array has a geometric configuration adapted to volumetrically sample tissue at a tissue site to differentiate or identify tissue at the tissue site. At least one energy delivery device is coupled to one of the sensor array, at least one of the plurality of resilient members or the elongated delivery device. The apparatus is then introduced into a target tissue site. The sensor array is then utilized to distinguish a tissue type. The tissue type information derived from the sensor array is utilized to position the energy delivery device to ablate a tumor volume. Energy is then delivered from the energy delivery device to ablate or necrose at least a portion of the tumor volume. The sensor array is then utilized to determine an amount of tumor volume ablation.

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